Moss, Curtis M CIV USN (USA)

From: Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA)
Sent: Monday, November 1, 2021 6:48 AM
To: Greger, Robert@CDPH
Cc: Gonzalo.Perez@cdph.ca.gov
Subject: RE: The Navy Uncovered Strontium — 90…and they want y…
Attachments: Aerial Map with Parcels HPNS.pdf; 01 Basewide Wall Map SizeE rev1.pdf; San Bruno Background Location.pdf
Signed By: derek.j.robinson1@navy.mil

Hi Rob,

I have attached two different base maps that may be useful. I have also answered your questions below in red text.

1- What do you mean by stating in your website FAQ on Sr-90 laboratory procedures that Navy is "extending the laboratory procedure timeframe an additional seven (7) days"? More specifically, our CDPH lab uses EPA Method 905.0 MOD also, and their procedure takes 2 weeks, with a 100-second count time. How did yours compare to that and what is being extended 7 days? Yes, the additional analysis is to allow for equilibrium. This was in consultation with the lab and Navy chemists and in combination with other changes to lower the uncertainty of the sample result and lower the detection limit. You may be correct with the SR-90 vs Y-90.
2- What laboratory is actually performing your Sr-90 analyses? I am 95% certain that Test America is the lab for Parcel G, but will not be able to confirm by 8:30am. However, other labs will also be asked to update their procedure, if necessary.
3- What is the basis of your remediation goal for Sr-90? The SR-90 remedial goal was based on use of the PRG calculator for residential exposure. This decision was made in 2006 and resulted in a remedial goal that is overly conservative. It was not a problem in the past, because we have has very limited strontium detected above these levels.
4- What background area is used - San Bruno Park? I included a map of San Bruno. The idea was to sample an area that included background from fallout. Unfortunately, this location did not seem to have the expected normal background.

I hope this answers your questions. I am free from 7-8am and can arrange a conf line to discuss.

Derek

From: Greger, Robert@CDPH <Robert.Greger@cdph.ca.gov>
Sent: Sunday, October 31, 2021 7:03 AM
To: Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1.civ@us.navy.mil>
Subject: [Non-DoD Source] RE: The Navy Uncovered Strontium — 90…and they want y…
Importance: High

Derek

After a bit of thought, I think that I understand why Navy added the 7 days (1 week). If I have it right, you won't have to address that question.

I think the additional 7 days will be added to the time between the initial total strontium analytical determination and the subsequent Y-90 analytical determination. By extending that determination to 3 weeks, Y-90 will have essentially

reached full equilibrium with Sr-90. Per my calculations the Y-90 is only 97.37% of equilibrium at 2 weeks; and because the Y-90 is assumed to be equal to the Sr-90, one underestimates the Sr-90 by 2.63% (erroneously attributing that 2.63% to Sr-89). But there shouldn't be any Sr-89 unless there has been relatively recent deposition of fission fallout. The last time that has occurred should have been Fukushima in 2011, and with the 52-day T ½ of Sr-89, any Sr-89 from Fukushima would have decayed over 77 half-lives (a factor of approximately 1.5E23) by now (essentially nonexistent now).

It seems that Navy could accomplish the same result by simply using the total Sr analytical result as Sr-90, and not bother with the Y-90 analysis.

Please let me know if this is correct, preferably by 8:30 Monday.

Rob

L. Robert Greger
Senior Health Physicist
California Department of Public Health
Radiologic Health Branch
Cell 714-831-7203
Fax 916-636-6341
robert.greger@cdph.ca.gov

From: Greger, Robert@CDPH
Sent: Friday, October 29, 2021 6:00 PM
To: Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1.civ@us.navy.mil>
Cc: Perez, Gonzalo@CDPH <Gonzalo.Perez@cdph.ca.gov>
Subject: RE: The Navy Uncovered Strontium — 90…and they want y…

Oops, I forgot the attachment.

From: Greger, Robert@CDPH
Sent: Friday, October 29, 2021 5:58 PM
To: Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1.civ@us.navy.mil>
Cc: Perez, Gonzalo@CDPH <Gonzalo.Perez@cdph.ca.gov>
Subject: RE: The Navy Uncovered Strontium — 90…and they want y…

Derek

I got the information concerning identifying Parcel G elsewhere when I got your out-of-office response to my below email.

I have a meeting Monday at 8:30 to answer some questions for Amy Brownell and Bob Burns regarding Navy's website FAQ for Sr-90 laboratory procedures.

I'm hoping you might be able to answer a few questions for me Monday morning, preferably before 8:30.

1- What do you mean by stating in your website FAQ on Sr-90 laboratory procedures that Navy is "extending the laboratory procedure timeframe an additional seven (7) days"? More specifically, our CDPH lab uses EPA Method 905.0 MOD also, and their procedure takes 2 weeks, with a 100-second count time. How did yours compare to that and what is being extended 7 days?
2- What laboratory is actually performing your Sr-90 analyses?
3- What is the basis of your remediation goal for Sr-90?

4- What background area is used - San Bruno Park?

Also, when you get a chance, please send me your laboratory procedure for Sr-90 soil analyses.

Thanks

Rob

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California Department of Public Health
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Cell 714-831-7203
Fax 916-636-6341
robert.greger@cdph.ca.gov

From: Greger, Robert@CDPH
Sent: Friday, October 29, 2021 1:38 PM
To: Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1.civ@us.navy.mil>
Subject: RE: The Navy Uncovered Strontium — 90…and they want y…

Derek

My HPNS HRA map doesn't show Parcel G. Do you have something that will show me where it is located?

Rob

L. Robert Greger
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Radiologic Health Branch
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Fax 916-636-6341
robert.greger@cdph.ca.gov

From: Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1.civ@us.navy.mil>
Sent: Thursday, October 28, 2021 1:38 PM
To: Greger, Robert@CDPH <Robert.Greger@cdph.ca.gov>; Sanchez, Yolanda <Sanchez.Yolanda@epa.gov>
Cc: Han, Terry@CDPH <Terry.Han@cdph.ca.gov>; Fassell, John@CDPH <John.Fassell@cdph.ca.gov>
Subject: RE: The Navy Uncovered Strontium — 90…and they want y…

Thanks for sharing Robert!

From: Greger, Robert@CDPH <Robert.Greger@cdph.ca.gov>
Sent: Thursday, October 28, 2021 12:01 PM
To: Sanchez, Yolanda <Sanchez.Yolanda@epa.gov>
Cc: Han, Terry@CDPH <Terry.Han@cdph.ca.gov>; Robinson, Derek J CIV USN NAVFAC SW SAN CA (USA) <derek.j.robinson1.civ@us.navy.mil>; Fassell, John@CDPH <John.Fassell@cdph.ca.gov>
Subject: [Non-DoD Source] FW: The Navy Uncovered Strontium — 90…and they want y…

Yolanda

I received confirmation from Genova Diagnostics today that they base their strontium determination on Sr-86 rather than Sr-88. They referenced issues with using Sr-88 due to interference with gases used in their mass spectroscopy process.

Feel free to share this email with other workgroup members as you see fit.

And thanks for your editorial assistance.

Rob

L. Robert Greger
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Cell 714-831-7203
Fax 916-636-6341
robert.greger@cdph.ca.gov

From: Greger, Robert@CDPH
Sent: Thursday, October 28, 2021 11:51 AM
To: Ahimsa Porter Sumchai MD PD <ahimsaportersumchaimd@hunterspointcommunitybiomonitoring.net>
Cc: Fassell, John@CDPH <John.Fassell@cdph.ca.gov>
Subject: RE: The Navy Uncovered Strontium — 90…and they want y…

Dr. Sumchai

While I do see that there were radionuclides, including Sr-90, identified in the Navy's Parcel F Feasibility Study, I am not able to conclude that the Sr-90 identified in that Study is connected to the nonradioactive strontium above the reference range in the CUEP that you enclosed of a Building 830/831 employee. As I have communicated previously, the CUEP analyses for most elements are based on quantification of nonradioactive isotopes, and that is the case for strontium (based on nonradioactive Sr-86 by Genova Diagnostics). The presence of nonradioactive Sr-86 does not predict the presence of Sr-90 or any other radioactive isotope of strontium inasmuch as strontium has no naturally occurring radioactive isotopes. I have attached my 8/10/20 email to you that goes into more detail in this regard. Refer to paragraph 5 in that email in particular.

Additionally, out of six CUEP results of Building 830/831 employees that I have seen, the one in your email is the only one that shows nonradioactive strontium above the Genova Diagnostics reference range. If there was a common exposure pathway to nonradioactive strontium among these Building 830/831 employees, I would expect to find a higher percentage of Building 830/831 employee CUEPs with elevated nonradioactive strontium in their CUEP results.

Your 9/22/20 email references 14 CUEPs of Building 830/831 employees. It would be beneficial to my investigation if you would be able to provide me the eight CUEPs of Building 830/831 employees that I don't have (I don't need any employee names). The six CUEPs I already have can be identified by the following creatinine concentrations: 43.38, 56.32, 59.46, 64.55, 128.73, and 195.92.

Take care.

Rob

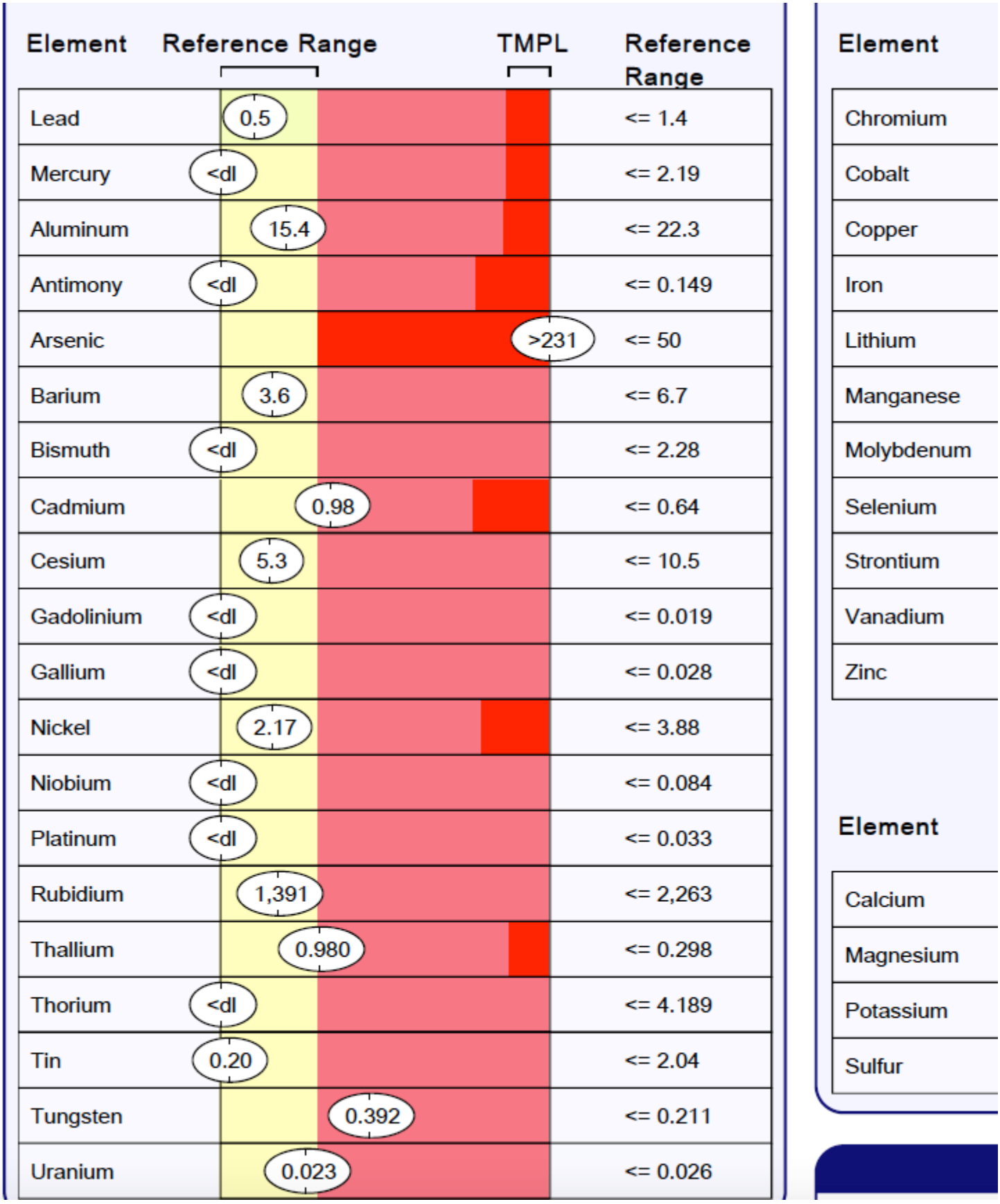
L. Robert Greger
Senior Health Physicist

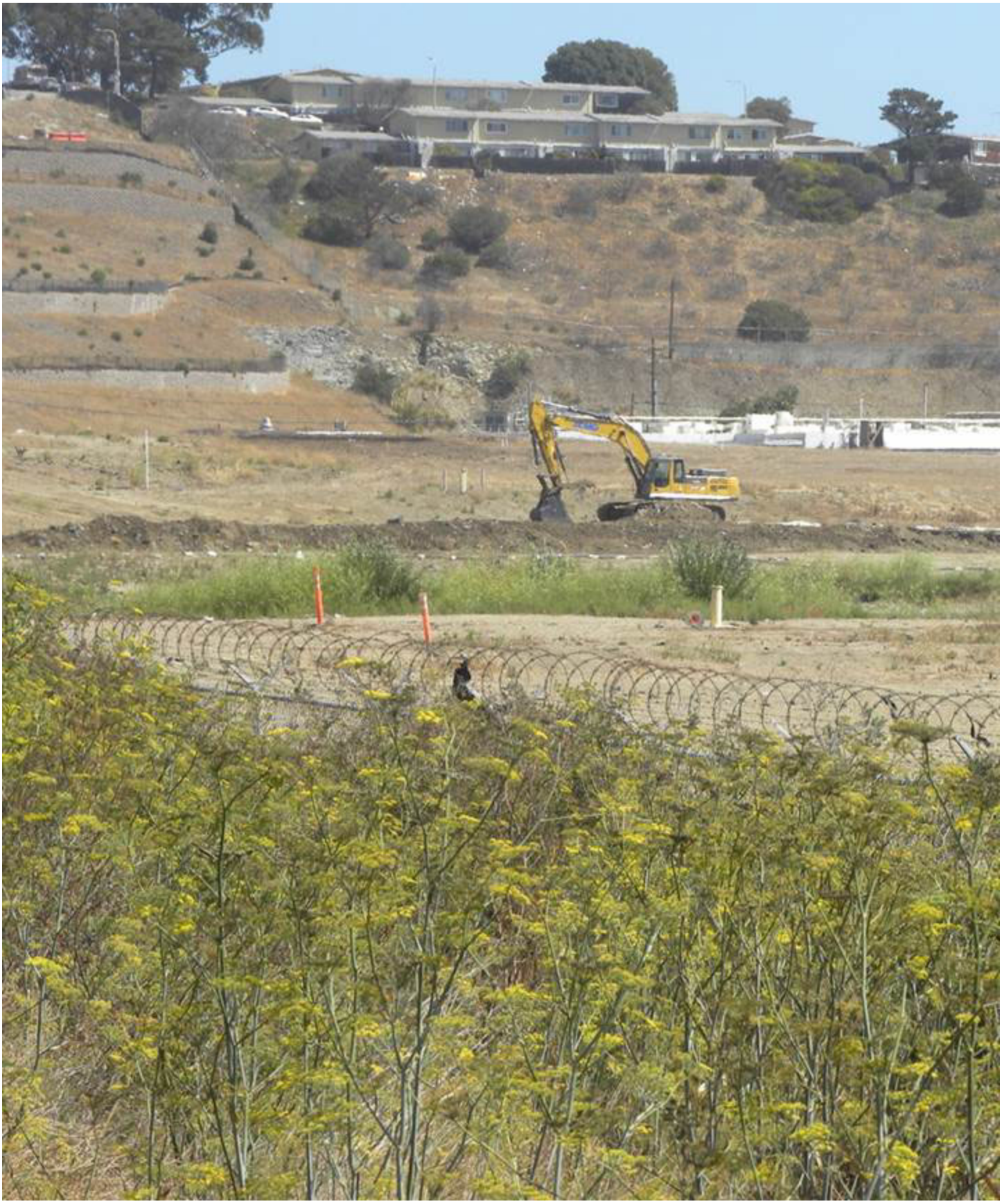
California Department of Public Health
Radiologic Health Branch
Cell 714-831-7203
Fax 916-636-6341
robert.greger@cdph.ca.gov

From: Ahimsa Porter Sumchai MD PD <ahimsaportersumchaimd@hunterspointcommunitybiomonitoring.net>
Sent: Sunday, October 24, 2021 10:54 AM
To: Greger, Robert@CDPH <Robert.Greger@cdph.ca.gov>
Cc: Ahimsa Porter Sumchai <AhimsaPorterSumchaiMD@HuntersPointCommunityBiomonitoring.net>; Beltran Sandra <sandra@bonnerlaw.com>; Jackie Lane <Lane.Jackie@epa.gov>; Waterhouse, Carlton <Waterhouse.Carlton@epa.gov>; James Dahlgren MD <dahlgren@envirotoxicology.com>
Subject: Re: The Navy Uncovered Strontium — 90…and they want y…
Importance: High

Thank you for your response Mr. Greger, but you missed the point if you did not note the Parcel F Feasibility study identifies elevations in radionuclides detected in the South Basin region adjacent to Building 830. The CUEP presented in the article that detects elemental strontium above reference range is that of a long term UCSF Building 830 employee. I am attaching pertinent documents I suggest you familiarize yourself with that are summarized in my medium article along with photos taken of the western fenceline separating Building 830 workers and the Hunters Point residential community from deep soil excavations being conducted at the Parcel E-2 shoreline, landfill and South Basin region. Let’s stay connected. Environmental toxicologist and expert witness in the “Erin Brokovich case” - Hinkley vs PG&E - has agreed to offer consults for the Hunters Point Biomonitoring Program.

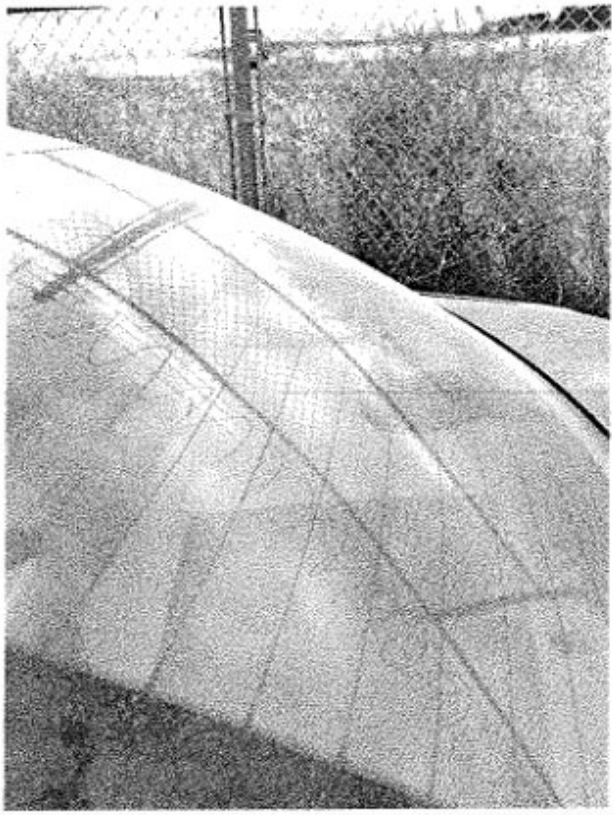
Ahimsa Porter Sumchai, MD - Hunters Point Biomonitoring Foundation Inc


Element
Reference Range
TMPL
Reference Range
Lead 0.5 <= 1.4
Mercury <dl <= 2.19
Aluminum 15.4 <= 22.3
Antimony <dl <= 0.149
Arsenic >231 <= 50
Barium 3.6 <= 6.7
Bismuth <dl <= 2.28
Cadmium 0.98 <= 0.64
Cesium 5.3 <= 10.5
Gadolinium <dl <= 0.019
Gallium <dl <= 0.028
Nickel 2.17 <= 3.88
Niobium <dl <= 0.084
Platinum <dl <= 0.033
Rubidium 1,391 <= 2,263
Thallium 0.980 <= 0.298
Thorium <dl <= 4.189
Tin 0.20 <= 2.04
Tungsten 0.392 <= 0.211
Uranium 0.023 <= 0.026
Element
Chromium
Cobalt
Copper
Iron
Lithium
Manganese
Molybdenum
Selenium
Strontium
Vanadium
Zinc
Element
Calcium
Magnesium
Potassium
Sulfur

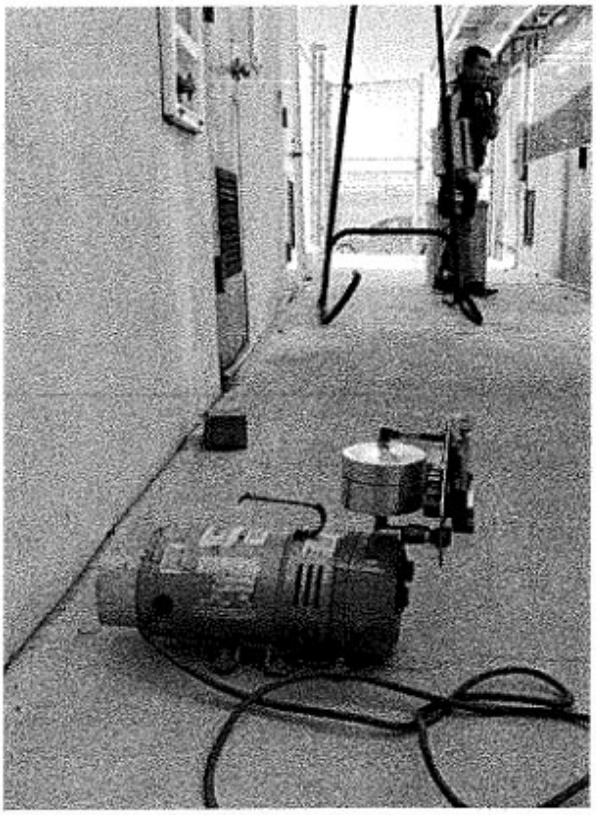


Dust from E-2 blowing onto UCSF property

Sign between E-2 & UCSF property



Dust accumulating on UCSF staff cars



Air monitoring pump


HP BIOMONITORING
5021 3rd Street
San Francisco, CA 94124
Ahimsa Porter Sumchai MD PD
PI & Medical Director
AhimsaPorterSumchaiMD@HuntersPoint
CommunityBiomonitoring.net
(415) 859-5471
https://www.alignable.com/san-francisco-ca/
hunters-point-community-biomonitoring-
program

Primer on Radionuclides Commonly Found at Superfund Sites

What is the purpose of these fact sheets?

The information in these fact sheets is intended to help the public understand more about the various radionuclides commonly found at Superfund sites.

What information is in these fact sheets?

These fact sheets answer questions such as:

- How can a person be exposed to the radionuclide?
- How can it affect human health?
- How does it enter and leave the body?
- What levels of exposure result in harmful effects?
- What recommendations has the U.S. Environmental Protection Agency (EPA) made to protect human health from exposure to radionuclides?

How does EPA calculate risks to human health from radiation exposure at Superfund sites?

EPA assesses the health effects of radiation by calculating **excess cancer risk** caused by radioactive contamination. Excess cancer risk is th probability that a person exposed to t contamination will develop cancer ov a lifetime.

EPA considers excess cancer risk to be any risk above the **protective range**. T protective range is a probability that a person exposed to radioactive and chemical contaminants will have between a one in 10,000 and a one in million chance of developing cancer, known as the 10^{-4} to 10^{-6} cancer risk range.

It is important to note that even in the protective range, most people will hav less of a chance of developing cancer than these numbers would indicate. T

EPA may also calculate health risk from exposure to radiation in dose per year, measured in **millirems per year**. Some regulations at Superfund sites are based on what EPA has calculated to be acceptable dose limits per year.

What is an Applicable or Relevant and Appropriate Requirement (ARAR)?

An ARAR is an environmental law or regulation from the federal government or a state government that addresses conditions or a particular cleanup technology at a Superfund site.

All actions to clean up contamination at Superfund sites must be protective of human health and the environment and comply with ARARs, unless a waiver is justified. ARARs are often the deciding factor in establishing cleanup levels at Superfund sites.

What radionuclides are listed in these fact sheets?

The following radionuclides are those most frequently encountered at EPA Superfund sites and are described in a series of EPA fact sheets.

- Americium-241
- Cesium-137
- Cobalt-60
- Iodine isotopes
- Plutonium isotopes
- Radium isotopes
- Radon
- Strontium-90
- Technetium-99
- Thorium isotopes
- Tritium
- Uranium isotopes

What if I want More Information

If you have questions about the radionuclides described in this document, you can contact Stuart Walker of EPA by e-mail at walker.stuart@epa.gov or by telephor at (703) 603-8748.

TABLE 4-3
Summary of Individual Sediment Samples Compared to Their PALs Phase 1, 2a, 2b Data
Addendum to the Feasibility Study Report for Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Radionuclide	CSM	Max Detected Concentration (pCi/g)	PAL (pCi/g)	Background Concentration (pCi/g)	PAL + Background Concentration (pCi/g)	No. of Exceedances of Pal +Background	Statio Excee PA
Cs-137	Intertidal	0.2480	1.28	0.0747	1.355	0	NA
	Subtidal	0.2450	425		425.1	0	NA
Co-60	Intertidal	0.0452	0.364	0.0426	0.4066	0	NA
	Subtidal	0.0884	99.9		99.94	0	NA
Pu-239/240	Intertidal	0.0422	67.8	0.0173	67.82	0	NA
	Subtidal	0.7530	68.2		68.22	0	NA
Ra-226	Intertidal	1.0600	1	0.6039	1.604	0	NA
	Subtidal	1.3800	22.4		23.00	0	NA
Sr-90	Intertidal	4.5600	9.37	0.1747	9.545	0	NA
	Subtidal	0.7590	9.93		10.10	0	NA
U-235	Intertidal	0.6720	4.22	0.2342	4.454	0	NA
	Subtidal	0.6970	101		101.2	0	NA

Notes:
[a] Maximum concentration equals the method detection limit substituted for a non-detect value. Concentration in table was not detected.
[b] Maximum concentration was reanalyzed using an archived sample during the Phase 2b data gap investigation. The reanalysi result from Phase 2b replaced the result from Phase 1.
Data Source: Battelle and Sea Engineering, 2013, Table 3-4 (Intertidal and Subtidal), Table 3-8, and Appendix B1-2 and ITSI Gilbane & SAIC, 2013, Table 3-4 (Intertidal and Subtidal) and Appendix B1.

https://semspub.epa.gov/work/09/100006005.pdf

Https://www.commiteetobridgethegap.org/wp-content/uploads/2019/12/CBG_Parcel_F_Comments.pdf

On Oct 22, 2021, at 1:45 PM, Greger, Robert@CDPH <Robert.Greger@cdph.ca.gov> wrote:

Dr. Sumchai

I don't mind receiving emails such as the one below, but to preclude any misunderstanding regarding actions on my part based on such emails, I would like to remind you that my jurisdictional interest at HPNS is limited to the UCSF property, including buildings 830 and 831).

Take care

Rob

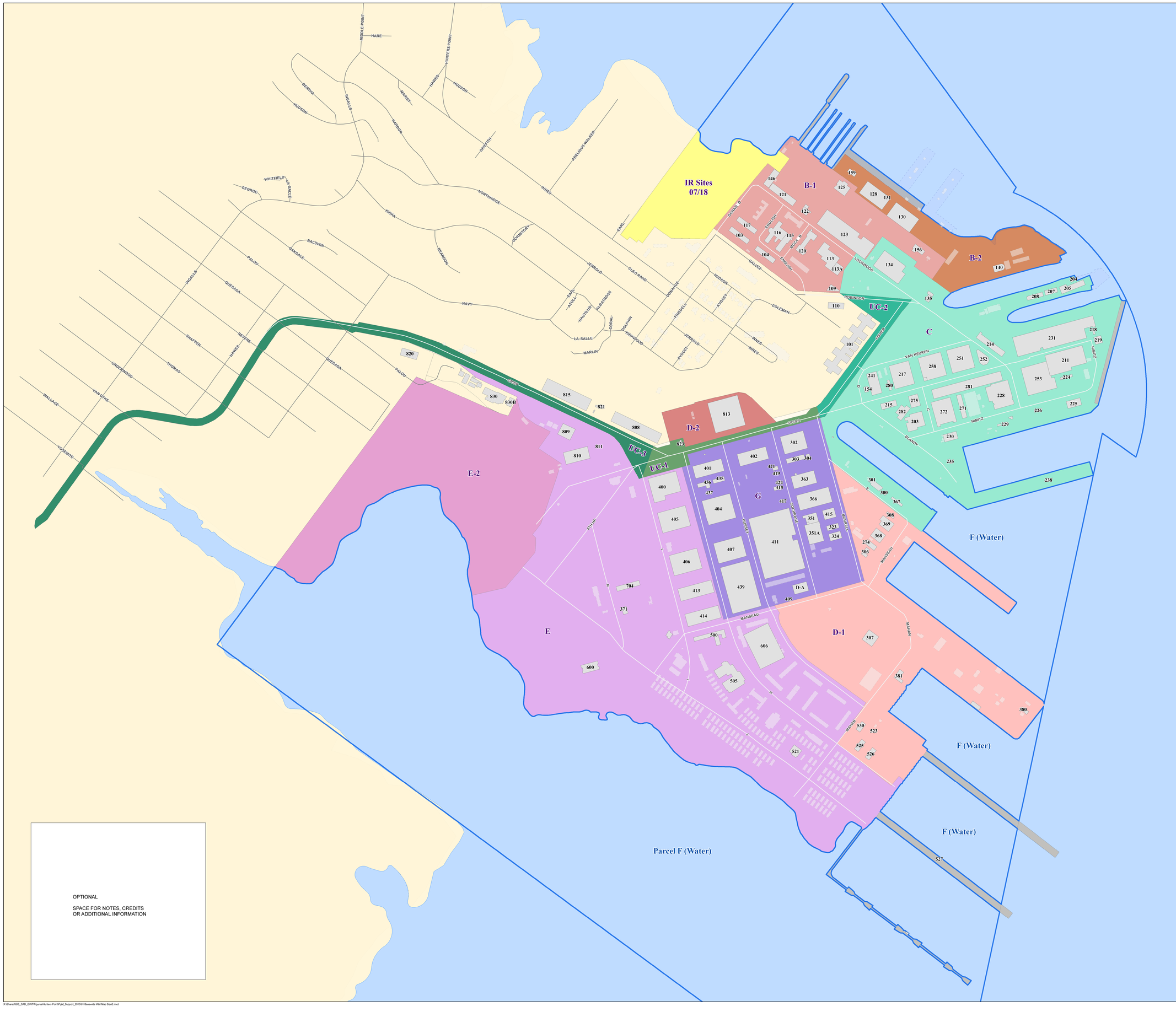
L. Robert Greger
Senior Health Physicist
California Department of Public Health
Radiologic Health Branch
Cell 714-831-7203
Fax 916-636-6341
robert.greger@cdph.ca.gov

-----Original Message-----
From: Ahimsa Porter Sumchai MD <asumchai@gmail.com>
Sent: Friday, October 22, 2021 8:47 AM
To: Greger, Robert@CDPH <Robert.Greger@cdph.ca.gov>
Subject: The Navy Uncovered Strontium — 90…and they want y…

EXTERNAL EMAIL. Links/attachments may not be safe. To report suspicious emails, click “Report Phish” button.

https://urldefense.com/v3/__https://ahimsaportersumchaimd.medium.com/the-navy-uncovered-strontium-90-and-they-want-you-to-think-its-okay-it-s-not-444244e61146__;!!AvL6XA!iuGWTjm-X4sSh5-SmBraLiiy7Rgyw9fmS-pkSumSBmou3c46XiyH69aU7yrKtdLSRrF2TUU$

Ahimsa Porter Sumchai MD
Golden State MD Health & Wellness
Sent from my iPhone



DEPARTMENT OF THE NAVY
BRAC PMO WEST
SAN DIEGO, CALIFORNIA

FORMER HUNTERS POINT NAVAL SHIPYARD
SAN FRANCISCO, CALIFORNIA

FIGURE 1

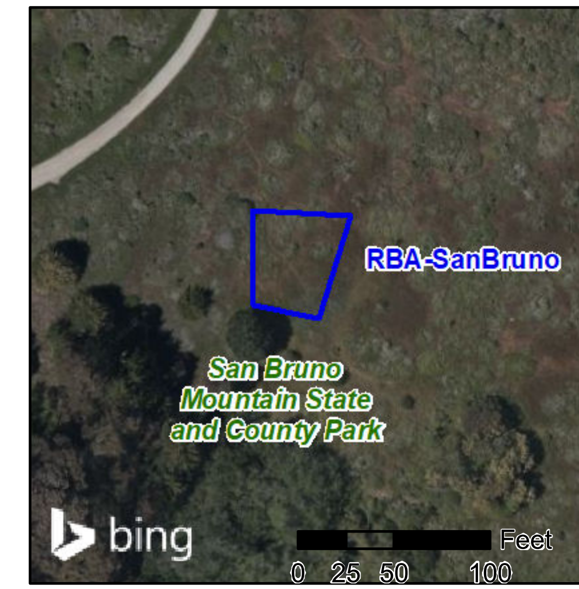
HUNTERS POINT BASE MAP

DATE: NOVEMBER 2015

NORTHERN CALIFORNIA REMEDIAL ACTION TEAM

X:\Shared\GIS_CAD_GIN\Figures\Hunters Point\Pdf_Support_201501 Basewide Wall Map Size\E.mxd


Evans Ave
3rd St
Former PG&E Plant
Herons Head Park
India Basin
F
Hilltop Park
Innes Ave
Palou Ave
Oakdale Ave
B
Keith St
Morgan Heights
A-2
A-1
UC-2
Mariners Village
C
Ingalls St
D-2
E-2
G
UC-1
Carroll Ave
South Basin
E
D-1
Bret Harte Elementary School
Candlestick Point State Recreation Area
F
Candlestick Park
San Francisco Bay
Current Navy Parcel
Former Parcel A, Currently SFRA Property
Aerial imagery courtesy of ESRI, 2010.
SFRA San Francisco Redevelopment Agency
N
0
1,500
3,000
Feet



Legend:

- Reference Background Area*
- Park
- Hunters Point Naval Shipyard

* NOTE:
The exact location of the RBA within San Bruno Mountain State Park may be adjusted based on consultation with County of San Mateo Parks Department personnel.

BASE MAP SOURCE:
Service Layer Credits: © 2020 Microsoft Corporation Earthstar Geographics SIO
© 2020 Microsoft Corporation © 2019 DigitalGlobe ©CNES (2019) Distribution Airbus DS

San Mateo County GIS (2016).

Figure 1-3
Offsite Reference Background Area
Background Soil Study Report
Former Hunters Point Naval Shipyard
San Francisco, CA